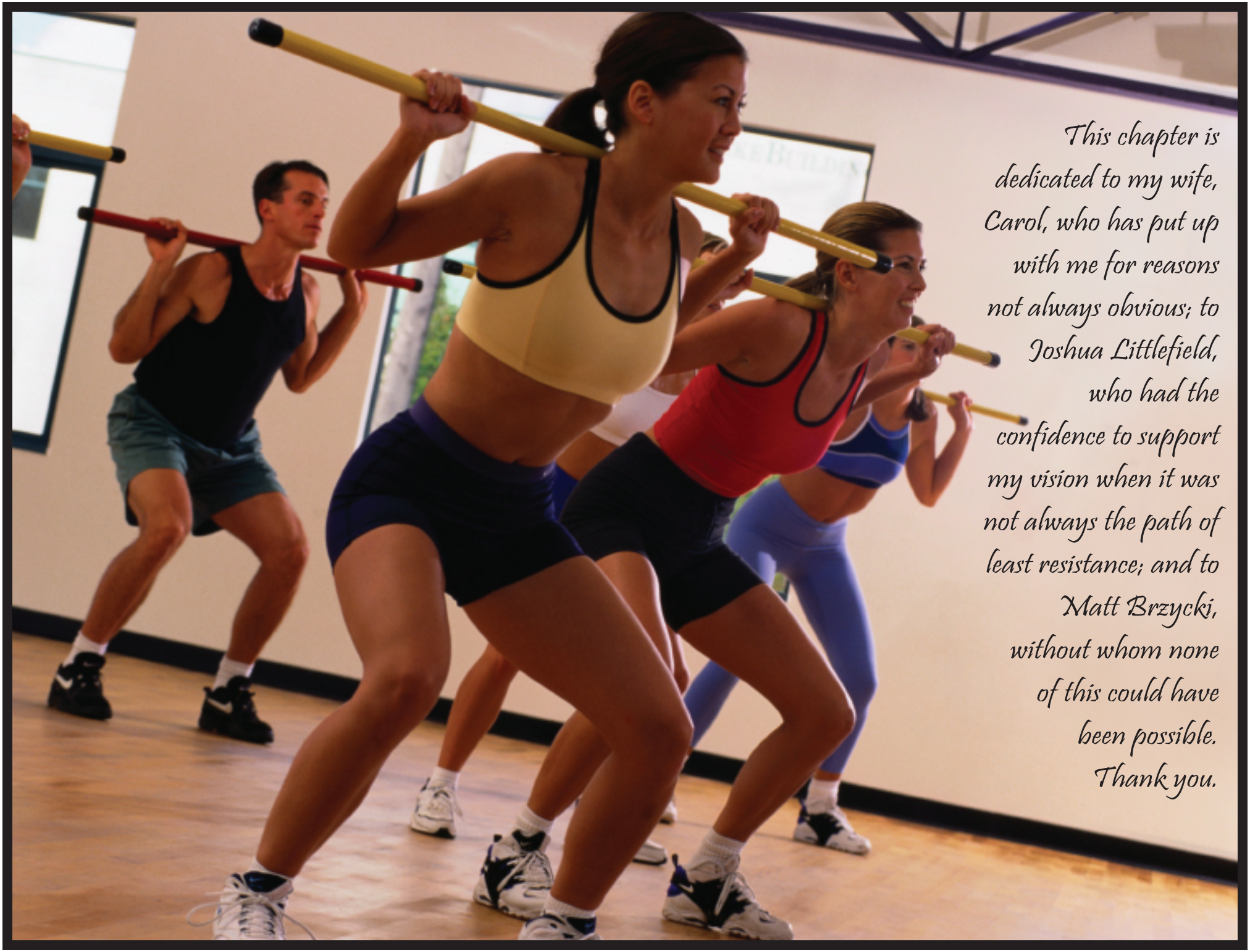

This chapter is dedicated to my wife, Carol, who has put up with me for reasons not always obvious; to Joshua Littlefield, who had the confidence to support my vision when it was not always the path of least resistance; and to Matt Brzycki, without whom none of this could have been possible. Thank you.

Chapter 6

Myths and Misconceptions in Fitness

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The fitness industry has been infected by a wide variety of myths and misconceptions. On the surface, some of them seem to make sense while others are simply incorrect and baseless. Understand that the fitness culture is deeply steeped in tradition. In many cases, bad information is innocently passed from one person to the next. The result is that many of these misconceptions – and misinformation – still persist today.

There's an old joke that states, "Never let the facts get in the way of a good emotional argument." This chapter will set the record straight by replacing some of the old "arguments" with new "facts." No doubt, you'll find it helpful, informative and relevant in your quest to get fit!

MYTH #1:
YOU CAN SELECTIVELY REDUCE FAT FROM YOUR BODY.

A common myth that's promoted by some product manufacturers and "celebrity fitness experts" is known as "spot reduction." This is the belief that if you target a certain body part, you can specifically – and significantly – reduce the amount of body fat at that site.

For instance, you've probably seen infomercials for products that promise to "melt away the fat" and give you a hard, flat stomach simply by doing lots of abdominal exercises – preferably with equipment that they sell. The same claims, in various forms, are made for flabby butts, thighs, arms and *<insert the name of your least favorite body part here>*.

Unfortunately, none of the claims are true. Although doing abdominal exercises will make your abdominals stronger, they'll do nothing to reduce the body fat stored in that area. Similarly, performing tricep exercises will make your triceps stronger but won't selectively use fat from the backs of your arms; doing hip abduction (lateral leg raises) will make your "glutes" stronger but won't selectively use fat from your hips.

When you exercise, fat is used at an even rate throughout your entire body and is only utilized when required as an energy source. It's physiologically impossible to selectively use fat from a specifically targeted site.

Most fitness authorities agree that the best way to reduce body fat is to reduce caloric intake and increase caloric expenditure. In other words, eat less and exercise more!

Although women can gain a considerable amount of muscular strength, most don't have the genetic potential to increase their muscular size.

MYTH #2:
YOU'LL RESPOND DIFFERENTLY FROM FREE WEIGHTS THAN FROM MACHINES.

Another common misconception is that free weights (barbells and dumbbells) enable you to better realize muscular gains (size) while machines make your muscles toned and leaner. The truth is that a muscle can't think. It doesn't say to itself, "I'm using a barbell so I better get big" or "I'm using a machine so I'll stay small and lean." Muscle has no cognitive ability. This means that a muscle can't tell the difference between a brick, a dumbbell, a machine or a soup can. Five pounds is five pounds.

What muscle does respond to is stress and intensity. This is achieved by using a sufficient workload to cause fatigue in a given muscle. It's fair to say that genetics, gender, intensity of effort and frequency of training have a far greater influence on muscular development than does the equipment that you use.

MYTH #3:
LIFTING WEIGHTS WILL GIVE WOMEN MASCULINE AND BULKY MUSCLES.

Women, just like men, come in all shapes and sizes. Some women are genetically predisposed to significant gains in muscular size. But by and large, they're the exceptions and not the rule. Although women can gain a considerable amount of muscular strength, most don't have the genetic potential to increase their muscular size. There are several physiological factors that dictate a woman's genetic potential.

The first factor is known as "neural adaptation." Because of this phenomenon, women can develop muscular strength through neural mechanisms (their nervous system) rather than through an increase in muscular size (as would be more typical of men).

The muscle-to-tendon ratio is a second factor. Tendons anchor muscles to bones. The ratio of the length of a muscle to the length of its tendon determines the potential to increase muscular size. The longer the muscle is in relation to its tendon, the greater the potential for a gain in size. Most women have smaller muscle-to-tendon ratios than do men thereby limiting the possibility of developing a significant increase in the size of their muscles.

A third factor is the male growth-stimulating hormone known as "testosterone." Among other things, testosterone promotes muscular growth. On average, women have a fraction of the testosterone that men have. Although some women have higher levels of testosterone and will develop accordingly, most women don't have the requisite hormonal levels to build large, bulky muscles. In fact, statistically, it's probably less than one in a million.

MYTH #4:
IF YOU LIFT WEIGHTS, YOU'LL BECOME MUSCLE BOUND AND LOSE FLEXIBILITY.

These days, most professional athletes – ranging from football players to golfers – do some type of strength training. These athletes wouldn't risk their livelihoods by jeopardizing their performance and flexibility. As a matter of fact, just the opposite is true. Athletes are constantly looking for a competitive advantage. Take the example of two athletes who have the same relative level of skill. The stronger, better-conditioned athlete will always have the edge. Not because the athlete is more muscular but because less energy is needed to perform the same tasks. An athlete who requires less energy to do a task is more efficient. The more efficient athlete will, over time, dominate.

As a result of increased flexibility and stronger connective tissues, the stronger athlete also has a lower potential to get injured. An athlete who can remain injury-free has an increased opportunity for success. It can't be overstated that, just like any other learned skill, flexibility needs to be practiced. Most athletes find that performing an adequate warm-up and engaging in a comprehensive stretching program both before and after a workout enables them to maintain their flexibility and, in many cases, promote an increased range of motion.

MYTH #5:
THERE ARE SPORT-SPECIFIC EXERCISES THAT CAN BE DONE IN THE WEIGHT ROOM.

Webster defines specific as "explicitly set forth; particular; definite." So if you're a golfer, the only thing that's specific to playing golf is playing golf. If you're a runner, the only thing that's specific to running is running. If you're a tennis player, the only thing that's specific to playing tennis is playing tennis. And so on.

Nothing that you do in the weight room is specific to a particular sport – unless, of course, your sport is weightlifting. In fact, in

Genetics, gender, intensity of effort and frequency of training have a far greater influence on muscular development than does the equipment that you use.

most cases, practicing highly developed timing and mechanical skills with weighted objects not only doesn't help but can ruin finely developed motor skills. Take the example of golfers who practice their swing with a weighted club or some other heavy object designed to "improve" their swing. What they're doing is altering their timing and mechanics to accommodate the unusually heavy weight. When they switch back to a club of normal weight, their timing and mechanics are completely off. In the scientific literature, this is known as a "negative transfer" of motor skills.

Perhaps a more sensible approach is to separate the issues into two distinctive components. The first component is strength training and conditioning. By isolating and strengthening individual muscles and improving cardiorespiratory function, you'll prepare your body for the demands of sports competition. The second component is skill training. This means that if you're a tennis player, you need to practice the skills required to play tennis such as serving a ball, hitting forehands and backhands and so on.

MYTH #6:

IN ORDER TO BUILD MUSCULAR SIZE AND STRENGTH, YOU MUST DO MULTIPLE SETS AND SPEND SEVERAL HOURS PER DAY IN THE WEIGHT ROOM.

It's unfortunate but this is one perception that has caused countless individuals to shun exercise. Because they think or have heard that long hours in the weight room are required, they feel overwhelmed and intimidated. Many people believe that they just don't have the time to get a comprehensive workout. They think that they must spend hours in the gym in order to get fit. The good news is that this isn't the case.

There's a preponderance of scientific evidence to support the theory that single-set routines are just as effective as multiple-set routines. If a set is done to the point of momentary muscular fatigue, most of the scientific data show that performing any additional sets produces negligible gains relative to the amount of energy that's expended. At the present time, there have been 62 published studies that compared the effectiveness of multiple-set training versus single-set training. Of those studies, 57 concluded that there was no appreciable distinction between the two. This means that

it's possible to get a comprehensive, full-body workout in as little as 30 minutes by only performing a single set of 8-12 repetitions to muscular fatigue for each major body part. It's also interesting to note that there are a great number of strength coaches for professional football, basketball and hockey – as well as for collegiate sports – who have been employing single-set training with their athletes since the 1970s.

MYTH #7:
IF YOU DO YOGA TWICE A WEEK, YOU DON'T NEED TO DO ANYTHING ELSE.

This myth surfaces almost daily. Exercise has become segregated by individual discipline/sport and each competes heavily for market share. This phenomenon is at least partially driven by the industry. Many runners, for instance, believe that they don't have to do strength training because they may become too bulky or it's unnecessary because they're already fit. Many yoga practitioners believe that because yoga incorporates breathing techniques, they don't have to do any aerobic training to improve their cardiorespiratory fitness and that

Fitness Myths

- You can selectively reduce fat from your body.
- You'll respond differently from free weights than from machines.
- Lifting weights will give women masculine and bulky muscles.
- If you lift weights, you'll become muscle bound and lose flexibility.
- There are sport-specific exercises that can be done in the weight room.
- In order to build muscular size and strength, you must do multiple sets and spend several hours per day in the weight room.
- If you do yoga twice a week, you don't need to do anything else.

The overwhelming body of scientific research indicated that cross-training not only doesn't hurt a specific discipline or sport but, in every instance, improves overall performance.

strength training may inhibit their flexibility. Many weightlifting enthusiasts don't see the value in aerobic training as it might impede potential development in muscular size and strength; frequently, they ignore stretching altogether. Well, it doesn't do you much good if you're really strong but can't touch your toes. Or if you're very flexible but can't climb a flight of stairs without getting winded. Or if you're a "cardio" monster but find it difficult to lift a suitcase out of the trunk of your car.

The overwhelming body of scientific research indicates that cross training – mixing up your workout program by incorporating a variety of exercises and activities – not only doesn't hurt a specific discipline/sport but, in every instance, improves overall performance. Imagine, if you will, a wheel with five spokes that represent your overall fitness. The five spokes are strength training, aerobic training, flexibility training, nutrition and recovery. If any of the spokes are shorter or longer than the others, the wheel – your overall fitness – will be out of true. Many authorities agree that the ultimate goal in fitness is to obtain overall balance. To that end, it's necessary for you to work on all five spokes of the wheel.